

Vitamin Study Q&A

Why was this study developed?

For many women separated from their babies—often due to work outside the home—choosing to express breastmilk and feeding it through a bottle has become more common. Millions of dollars have been spent in food science research to determine how to best maintain nutrients in cow's milk. Expressed breastmilk has been over-looked when it comes to studies of nutrient maintenance during handling and feeding back. This study was designed to create a baseline of knowledge about how bottle feeding impacts nutrient delivery to infants.

Why did you choose to study vitamins A, C and E?

Vitamins A, C, and E are nutrients that most people are familiar with in their daily lives. These nutrients are critical for infant growth and health. Combined with the fact that vitamins A, C, and E are susceptible to degradation, it makes sense to study them.

How did you determine which bottle brands to use?

The bottles were those that are commonly available in the United States at stores such as Babies R Us and Walmart. We chose the ones that seem to be the most popular.

What factors determine the percentage of nutrient loss?

The number one factor that is associated with a decrease in nutrient concentrations was what the research team called the “cappuccino effect.” When air bubbles are formed in the milk, nutrients are lost to oxidation. The more bubbles that appear, the greater the nutrient decreases.

What else did the study reveal or suggest that moms and the medical community should be aware of?

The amount of air in the bottle above the milk (the headspace) and the surface area of the milk exposed to air also seem to be factors in nutrient loss. This relates to the size and shape of the bottle. Decreasing the air exposure of the milk with small, frequent feedings may be the best way to ensure that babies are getting adequate amounts of nutrients.

What about parents who say “I’ve been doing it this way forever,” or “I was bottle fed and I’m just fine?”

Those comments are heard frequently. And while it may be true that they are OK, there is a big difference between being OK and having optimal health. It is important to give every infant the opportunity to have optimal health.

Does the study have implications outside of baby bottle nutrition?

As a researcher, I believe that there are many elements of packaging type, storage practices and feeding/use practices that may impact the nutritional value of consumed foods. There are no conclusions in this regard at this point, but these areas certainly warrant more study.

How are these results being received by the scientific community?

The health care professionals who have seen the study are excited because this is new and important data. The information has been very well received and generated many questions about what should be studied next in the area of optimizing infant nutrition. Like all good science, it has lead to many more questions.

Who funded this study?

The study was funded by a grant from the Handi-Craft Company.

Are you associated with the Dr. Brown's brand?

I am an independent researcher, nutritionist, and lactation consultant. I serve as a lactation management resource for the Handi-Craft Company.

Why would the scientific community—or parents—believe that this research is non-biased if it is being supported in part by one of the bottle manufacturers?

The research was conducted in a highly-credible research lab, by a qualified team of scientists, using industry-standard and state-of-the-art equipment. The study was also completed in triplicate to ensure the accuracy of the results. We have also documented our procedures in a highly-detailed manner so the study can be repeated independently. In fact, we would encourage further study and verification of the results since the outcome is so important to infant nutrition.